

REMARKS/ARGUMENTS

Claims 54 and 56 have been amended to remove the modifier “aqueous” in relation to the ink-jet ink. Support for this amendment is provided on page 11 (lines 2-4). Claim 60 has been cancelled and Claim 61 has been amended to change its dependency.

New Claim 71 relates to the absence of a crosslinking catalyst for the aminoplast as described on page 15, lines 20-22, of the present application.

Rejection Under 35 U.S.C. §112(1)

Claims 54 and 60-61 have been rejected as failing to comply with the enablement requirement of Section 112. The Examiner argues that the specification fails to teach how a hydrophobic coating could be made hydrophilic as called for in some embodiments of Claim 54.

Applicant respectfully traverses this rejection. On page 19, lines 10-16, Applicants describe how a substrate could have a hydrophobic coating if the amount of aminoplast is present at relatively higher concentration (i.e. 10% to 20% solids). In such embodiments, the ink-jet ink or fluid could be made hydrophilic by omitting pigments or resins that would otherwise make it oleophilic. Such a hydrophilic ink-jet ink or fluid can then be applied to the oleophilic surface to provide a hydrophilic imaged areas. While Applicant does not provide a working demonstration of such embodiments, he believes that such components are well known in the art and a skilled artisan would know how to use them in the described fashion in view of the remaining teaching in the application. Thus, the original specification provides enabling support for all embodiments of Claim 54. The amendment to Claim 54 to remove “aqueous” may provide clarity of the claim language in relation to the scope of various embodiments described in the specification.

Claim 60 is cancelled without traverse thereby obviating the rejection of that claim under Section 112(1). Claim 61 has been amended to change its dependency to Claim 54.

Thus, it is believed that the Section 112(1) rejection has been overcome and should be withdrawn.

Rejection Under 35 U.S.C. §112(2)

Claim 56 has been rejected as being indefinite as being unclear as to how the aqueous ink-jet ink could be used to create a hydrophilic or oleophilic image. This rejection is traversed for similar reasons presented above with respect to the rejection of Claim 54. Page 19 (lines 10ff) describes how an ink-jet ink or fluid can be modified to provide hydrophilic imaged areas. Claims 54, and 56 from which it depends, have been amended to provide more clarity as to the scope of the invention.

Rejection Under 35 U.S.C. §102(b)

Claims 40, 41, 43-47, and 49-53 have been rejected as anticipated by the teaching in EP 1,057,622A1 (Fukino et al.). This rejection is respectfully traversed. Since anticipation requires that all recited elements or features are in a single reference, this rejection is in error because Fukino et al. does not meet that statutory requirement.

The Office Action points to paragraph 246 of Fukino et al. as teaching both polyvinyl alcohol and polyacrylic acid. Both polymers are mentioned in a lengthy list of possible alternative high molecular weight compounds for the image-recording layer. The list of such compounds beginning with “Specifically....” describes many possible high-molecular weight compounds but does not describe their use in combination. There is no mention of mixtures, or even the phrase “or combinations thereof” that is commonly used in patent parlance. Thus, there is no explicit or implicit description of a lithographic printing blank that has a coating comprising a combination of polyvinyl alcohol and polyacrylic acid.

Applicant would also point out other differences between the teaching in Fukino et al. and the presently claimed invention. Fukino et al. is directed to lithographic printing plate precursors that comprise hydrophobic materials that become oleophilic upon heating [0031]. Such change in imaged layer characteristics is critical to the imaging system in Fukino et al. In contrast, Applicant’s lithographic printing plate blank comprises a deposited composition that retains its hydrophilic or oleophilic characteristic upon ink jet imaging and any post-imaging heating step. If Applicant’s composition was changed in the manner that Fukino et al. describes, either the entire surface would accept ink, or it would

completely reject ink. Thus, besides the lack of a teaching of a combination of polymers, there are very fundamental differences between Fukino et al. and the presently claimed invention.

Applicant's claims 41, 43-47 and 49-53 that are dependent upon Claim 40 are likewise novel at least because of their dependency on that novel claim.

Thus, the Section 102(b) rejection should be withdrawn.

Rejections Under 35 U.S.C. §103(a)

Several unpatentability rejections have been made over various combinations of art, and each rejection is considered in turn.

Claim 48 has been rejected as unpatentable over Fukino et al. Applicant respectfully traverses this rejection. Even if the Examiner's statements about Fukino et al. are accepted for argument sake in relation to Claim 48, the combination of subject matter in Claims 40 and 48 is not taught or suggested in Fukino et al. As pointed out above, Fukino et al. fails to describe the use of a combination of polymers in the coating on the substrate.

Further, as pointed out above, Fukino et al. is directed to lithographic printing plate precursors that comprise hydrophobic materials that become oleophilic upon heating [0031]. Such change in imaged layer characteristics is critical to the imaging system in Fukino et al. In contrast, Applicant's lithographic printing plate blank comprises a deposited composition that retains its hydrophilic or oleophilic characteristic upon ink jet imaging and any post-imaging heating step. Thus, there are very fundamental differences between Fukino et al. and the presently claimed invention, and Applicant's claimed materials with different applied compositions are not taught or suggested by Fukino et al. Thus, the rejection of Claim 48 is improper and should be withdrawn.

Claim 42 has also been rejected as unpatentable over the combined teaching in Fukino et al. and US 5,820,932 (Hallman et al.). Claim 42 calls for the coating on the substrate to be oleophilic. Even if the Examiner's statements about Fukino et al. and Hallmann et al. are accepted for argument sake in relation to Claim 42, the combination of subject matter in Claims 40 and 42 is not taught

or suggested in Fukino et al. with Hallman et al. As pointed out above, Fukino et al. fails to describe the use of a combination of polymers in the coating on the substrate. Nothing in Hallman et al. would overcome this deficiency. Moreover, nothing in Hallman et al. would overcome the difference between Fukino et al. and the presently claimed invention in relation to the different types of imaging compositions. Hallmann et al. teaches the use of hydrophobic material that is washed away in non-imaged areas. So, even if Hallman et al. provides a suggestion of an oleophilic coating, which Applicant is not admitting, the combined teaching still fails to suggest the presently claimed invention having a permanent layer that is not washed away. Thus, the rejection of Claim 42 is improper and should be withdrawn

Claims 54-56 and 59 have been rejected as unpatentable over Fukino et al. in view of US 2001/0019760 (Kawamura) and US 6,444,750 (Touhsaent). This rejection is respectfully traversed. The Examiner argues that Kawamura teaches a method of forming an imaged printing plate by switching a hydrophilic surface to a hydrophobic surface by application of a catalyst using ink jet means. Touhsaent is argued to teach a method of making a polyvinyl alcohol coating hydrophobic by crosslinking it with urea formaldehyde in the presence of an acid catalyst.

Applicant believes that Kawamura is directed to a problem of making a hydrophilic layer that is not attacked by a fountain solution [0004], [0005], and [0007]. This problem is allegedly solved by using a hydrophilic graft polymer that is chemically bonded directly to the support surface [0010]. This problem and solution are different than the focus of the presently claimed invention and nothing in Kawamura, alone or in combination with Fukino et al. would suggest otherwise.

Touhsaent apparently teaches a method of making a polyvinyl coating hydrophobic (Col. 1, lines 15-25), but Applicant believes that this reference fails to suggest hydrophobic properties. It merely suggests that a hydrophilic coating can be made resistant to attack by fountain solutions.

Applicant's claimed method is not taught or suggested by the combination of teachings. For example, as pointed out above, Fukino et al. fails to teach or suggest a coating composition having a combination of a polyvinyl

alcohol and a polyacrylic acid. Those components are taught only as alternatives. Neither Kawamura nor Touhsaent overcomes this deficiency. They are no better than Fukino et al. Thus, this combination of art cannot render Applicant's method unpatentable.

In addition, Claims 57-58 have been rejected as unpatentable over the combination of Fukino et al., Kawamura, Touhsaent, US 2002/0054981 (Deutsch et al.) and US 5,556,583 (Tashiro et al.). This rejection is also respectfully traversed. Irrespective of the teaching in Tashiro et al. and Deutsch et al. relating to specific method features, the combination of art fails to teach the use of polyvinyl alcohol and polyacrylic acid in combination in a composition that is deposited by ink jetting means. Neither Tashio et al. nor Deutsch et al. overcomes the deficiencies in Fukino et al. that have been discussed above. Thus, this rejection is also in error.

Claim 69 has been rejected as being unpatentable over Fukino et al. taken with Kawamura and Touhsaent. This rejection is respectfully traversed for the same reasons stated above.

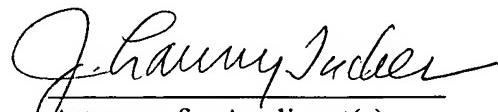
This rejection is faulty just like the previously-considered rejections that are based on Fukino et al. alone or Fukino et al. with one or more other cited references. None of the secondary references "cures" the fatal defect in Fukino et al., i.e. the lack of a teaching of the use of a combination of polyvinyl alcohol and polyacrylic acid. It is thus irrelevant that Kawamura and Touhsaent may provide teaching about a number of other features because even if such teaching is present, they fail to teach their use in Applicant's claimed printing process in which the substrate has a coating with the combination of polymers described above. Thus, the rejection of Claim 69 should be withdrawn for the same reasons as noted above.

Lastly, Claim 70 has been rejected as unpatentable over Fukino et al. in view of Kawamura, Touhsaent and Applicant's "admitted prior art" on page 10 (lines 6-11) of the present application. This rejection is also respectfully traversed for the same reasons presented above relative to Claim 69. Moreover, Applicant is not relying on the subject matter of Claim 70 for patentability at this

time. Since the claimed subject matter of Claim 69 is patentable, so is the subject matter derived from the combination of Claims 69 and 70. Thus, the rejection of Claim 70 should be withdrawn.

In view of the foregoing amendments and remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the examiner is earnestly solicited.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.